AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-9. (Canceled)

10. **(New)** An injector for fuel injection systems of internal combustion engines, in particular direct-injection diesel engines, the fuel injector system comprising

a piezoelectric actuator contained in an injector body and acted on by a first spring mechanism so that it remains in contact with the injector body at one end and with a sleeve-like booster piston on the other;

a nozzle body connected to the injector body and having at least one nozzle outlet opening, and in which a stepped first nozzle needle is guided in an axially movable fashion;

a second spring mechanism contained inside the booster piston and, together with the injection pressure acting on the rear end of the first nozzle needle, holds the first nozzle needle in the closed position;

an outer control chamber at the nozzle needle end of the booster piston and communicating via at least one leakage gap with a fuel supply under injection pressure with the fuel contained in the outer control chamber acting on the first nozzle needle in the opening direction;

a rear region of the first nozzle needle fitted into an internal chamber of the booster piston, the rear region of the first nozzle needle having a larger diameter than a nozzle outlet region of the first nozzle needle,

a concentric axial recess passing through the first nozzle needle, which recess is stepped by means of a shoulder,

a second nozzle needle which is correspondingly stepped by means of a shoulder fitted into the concentric axial recess in an axially movable fashion, and

a second inner chamber formed inside the axial recess between its shoulder and the shoulder of the second nozzle needle, which second inner chamber being hydraulically connected to the first outer control chamber;

the control chamber volumes and the surfaces of the nozzle needles which are acted on by the control chamber pressures, the pressure of the fuel supply, and the spring mechanism pressure being matched to each other so that the two nozzle needles open in succession in response to a change to the electrical voltage applied to the piezoelectric actuator.

11. **(New)** The injector according to claim 10, wherein the fluid pressure-loaded surfaces of the second nozzle needle in comparison to the fluid pressure-loaded surfaces of the first nozzle needle are designed so that the second nozzle needle opens at a comparatively low control chamber pressure corresponding to a comparatively low piezoelectric actuator voltage, but the first nozzle needle only opens at a comparatively high control chamber pressure corresponding to a comparatively high piezoelectric actuator voltage.

12. **(New)** The injector according to claim 10, wherein the two control chambers communicate with each other hydraulically via a bore passing obliquely through the first nozzle needle.

13. **(New)** The injector according to claim 11, wherein the two control chambers communicate with each other hydraulically via a bore passing obliquely through the first nozzle needle.

14. **(New)** The injector according to claim 10, wherein the inner chamber of the booster piston is hydraulically connected to the fuel supply, the injector further comprising a third spring mechanism contained inside the booster piston and acting on the piezoelectric actuator end of the second nozzle needle in the direction toward the closed position.

15. **(New)** The injector according to claim 11, wherein the inner chamber of the booster piston is hydraulically connected to the fuel supply, the injector further comprising a third spring mechanism contained inside the booster piston and acting on the piezoelectric actuator end of the second nozzle needle in the direction toward the closed position.

16. **(New)** The injector according to claim 12, wherein the inner chamber of the booster piston is hydraulically connected to the fuel supply, the injector further comprising a third spring mechanism contained inside the booster piston and acting on the piezoelectric actuator end of the second nozzle needle in the direction toward the closed position.

17. **(New)** The injector according to claim 14, wherein the spring mechanism that acts on the nozzle needle in the closing direction is a helical compression spring that is situated coaxial to the first nozzle needle and rests against its rear end surface at one end and at the other end, rests against the piezoelectric actuator end of the internal chamber of the booster piston, and wherein

the third spring mechanism is also a helical compression spring, which is encompassed by and concentric to the second spring mechanism and which rests against the second nozzle needle at one end and at the other end, rests against the piezoelectric actuator end of the inner chamber of the booster piston.

18. **(New)** The injector according to claim 15, wherein the spring mechanism that acts on the nozzle needle in the closing direction is a helical compression spring that is situated coaxial to the first nozzle needle and rests against its rear end surface at one end and at the other end, rests against the piezoelectric actuator end of the internal chamber of the booster piston, and wherein

the third spring mechanism is also a helical compression spring, which is encompassed by and concentric to the second spring mechanism and which rests against the second nozzle needle at one end and at the other end, rests against the piezoelectric actuator end of the inner chamber of the booster piston.

19. **(New)** The injector according to claim 16, wherein the spring mechanism that acts on the nozzle needle in the closing direction is a helical compression spring that is situated coaxial

to the first nozzle needle and rests against its rear end surface at one end and at the other end, rests against the piezoelectric actuator end of the internal chamber of the booster piston, and wherein

the third spring mechanism is also a helical compression spring, which is encompassed by and concentric to the second spring mechanism and which rests against the second nozzle needle at one end and at the other end, rests against the piezoelectric actuator end of the inner chamber of the booster piston.

20. **(New)** The injector according to claim 17, further comprising a shoulder at the piezoelectric actuator end of the second nozzle needle, adjoined by a smaller-diameter pin piece the helical compression spring serving as the third spring mechanism being placed onto the pin piece.

21. **(New)** The injector according to claim 18, further comprising a shoulder at the piezoelectric actuator end of the second nozzle needle, adjoined by a smaller-diameter pin piece the helical compression spring serving as the third spring mechanism being placed onto the pin piece.

22. **(New)** The injector according to claim 19, further comprising a shoulder at the piezoelectric actuator end of the second nozzle needle, adjoined by a smaller-diameter pin piece the helical compression spring serving as the third spring mechanism being placed onto the pin piece.

23. **(New)** The injector according to claim 10, wherein the nozzle outlet region of the nozzle body contains a cylindrical pressure chamber that concentrically encompasses the first nozzle needle and is hydraulically connected to the fuel supply under injection pressure, wherein

the axial recess of the first nozzle needle through which the second nozzle needle passes has a diametrical expansion in its nozzle outlet region, thus producing an annular, cylindrical cavity encompassing the second nozzle needle in its nozzle outlet region, and wherein the first nozzle needle being at least one radial bore let into it, which hydraulically connects the cylindrical pressure chamber to the annular, cylindrical cavity.

24. **(New)** The injector according to claim 11, wherein the nozzle outlet region of the nozzle body contains a cylindrical pressure chamber that concentrically encompasses the first nozzle needle and is hydraulically connected to the fuel supply under injection pressure, wherein

the axial recess of the first nozzle needle through which the second nozzle needle passes has a diametrical expansion in its nozzle outlet region, thus producing an annular, cylindrical cavity encompassing the second nozzle needle in its nozzle outlet region, and wherein the first nozzle needle being at least one radial bore let into it, which hydraulically connects the cylindrical pressure chamber to the annular, cylindrical cavity.

25. **(New)** The injector according to claim 12, wherein the nozzle outlet region of the nozzle body contains a cylindrical pressure chamber that concentrically encompasses the first nozzle needle and is hydraulically connected to the fuel supply under injection pressure, wherein

the axial recess of the first nozzle needle through which the second nozzle needle passes has a diametrical expansion in its nozzle outlet region, thus producing an annular, cylindrical cavity encompassing the second nozzle needle in its nozzle outlet region, and wherein the first nozzle needle being at least one radial bore let into it, which hydraulically connects the cylindrical pressure chamber to the annular, cylindrical cavity.

26. **(New)** The injector according to claim 10, wherein the nozzle outlet of the nozzle body comprises one or more radially outer nozzle outlet openings controlled by the first nozzle needle and one or more radially inner nozzle outlet openings controlled by the second nozzle needle.

27. **(New)** The injector according to claim 11, wherein the nozzle outlet of the nozzle body comprises one or more radially outer nozzle outlet openings controlled by the first nozzle needle and one or more radially inner nozzle outlet openings controlled by the second nozzle needle.

28. **(New)** The injector according to claim 12, wherein the nozzle outlet of the nozzle body comprises one or more radially outer nozzle outlet openings controlled by the first nozzle needle and one or more radially inner nozzle outlet openings controlled by the second nozzle needle.

29. **(New)** The injector according to claim 10, wherein the end region of the nozzle body which contains the nozzle outlet openings and the end sections of the two nozzle needles which function as closing bodies, are embodied as conical so that when the nozzle needles are both in the closed position or open position, their end sections combine to form a single conical surface.